6. Isaac

Program Name: Isaac.java **Input File: isaac.dat**

The computer company Isaac works for is introducing a brand new computer line and is developing a new Unix-like operating system to be introduced along with the new computer. Your task is to help Isaac write the formatter for the ls command (which lists directory contents). Input to your program will consist of a list of F filenames that you will sort (ascending based on the ASCII character values) and format into C columns based on the length L of the longest filename. Filenames will be between 1 and 60 (inclusive) characters in length and will be formatted into left-justified columns. The rightmost column will be the width of the longest filename and all other columns will be the width of the longest filename plus 2. There will be as many columns as will fit in 60 characters. **Your program should use as few rows R as possible with columns being filled to capacity from left to right.**

Input: Input starts with a line containing an integer N (1<=N<=10), the number of test cases. Each test case begins with an integer F (1 <= F <= 250) on a single line, the number of files for the given case. The following line will contain F file names, separated by spaces. The filenames are all valid names, but are not guaranteed to be in alphabetical order.

Output: For each test case, output Case # on one line followed by the column indexing for each of the 60 spaces. You are then to output 60 dashes following the column indexing followed by the formatted columns of filenames. The sorted file names 1 to R will be listed down column 1; filenames R + 1 to 2R listed down column 2; etc. For row and column entries where a file name is present, spaces should be output to completely fill the column. For row and column entries that do not have a file name, there should not be any output, i.e., no spaces should be printed. Each case's output is separated by a blank line

Sample Input:

```
5
10
much_longer_name very_long_file_name shorter tiny size-1 size2
12345678.123 mid_size_name 2short4me size3
12
Weaser Alfalfa Stimey Buckwheat Porky Joe Darla Cotton Butch Froggy
Mrs_Crabapple P.D.
26
a b c d e f g h i j k l m n o p q r s t u v w x y z
21
abcdefg bcdefgh cdefghi defghij efghijk fghijkl ghijklm hijklmn
ijklmno jklmnop klmnopq lmnopqr 1111111 mnopqrs nopqrst opqrstu
pqrstuv qrstuvw rstuvwx stuvwxy tuvwxyz
23
Jody jody Buffy bubby sissy Sissy Keith Keith Danny Danny Lori Chris
Shirley Marsha greg Mike Greg jan Bobby Alice Ruben lori mike
```

Sample Output:

```
Case 1
         1111111111222222222233333333334444444444555555555556
1234567890123456789012345678901234567890123456789012345678890
------------------------------------------------------------
12345678.123         size-1
2short4me            size2
mid_size_name        size3
much_longer_name     tiny
shorter              very_long_file_name

Case 2
         1111111111222222222233333333334444444444555555555556
1234567890123456789012345678901234567890123456789012345678890
------------------------------------------------------------
Alfalfa        Cotton         Joe            Porky
Buckwheat      Darla          Mrs_Crabapple  Stimey
Butch          Froggy         P.D.           Weaser

Case 3
         1111111111222222222233333333334444444444555555555556
1234567890123456789012345678901234567890123456789012345678890
------------------------------------------------------------
a  c  e  g  i  k  m  o  q  s  u  w  y
b  d  f  h  j  l  n  p  r  t  v  x  z

Case 4
         1111111111222222222233333333334444444444555555555556
1234567890123456789012345678901234567890123456789012345678890
------------------------------------------------------------
1111111  defghij  hijklmn  lmnopqr  pqrstuv  tuvwxyz
abcdefg  efghijk  ijklmno  mnopqrs  qrstuvw
bcdefgh  fghijkl  jklmnop  nopqrst  rstuvwx
cdefghi  ghijklm  klmnopq  opqrstu  stuvwxy

Case 5
         1111111111222222222233333333334444444444555555555556
1234567890123456789012345678901234567890123456789012345678890
------------------------------------------------------------
Alice    Danny    Keith    Mike     bubby    lori
Bobby    Danny    Keith    Ruben    greg     mike
Buffy    Greg     Lori     Shirley  jan      sissy
Chris    Jody     Marsha   Sissy    jody
```